

REMARKS

The Office Action dated August 21, 2008 was received and carefully reviewed.

By this response, claims 1-4 are hereby amended to clarify the invention, and not for reasons of patentability. No claims have been added, and no claims have been canceled. Accordingly, claims 1-7 remain pending in this application.

Reconsideration and withdrawal of the currently pending rejections are requested for the reasons advanced in detail below.

Specification

The title of the invention has been amended, thereby obviating any perceived lack of descriptiveness noted by the Examiner. Accordingly, Applicants respectfully request withdrawal of the objection.

Double Patenting

Claims 1, 2, 4 and 6 stand provisionally rejected on the ground of nonstatutory obviousness-type double patenting as allegedly being unpatentable over claims 1, 6, 8 and 10 of copending U.S. Patent Application No.: 10/564,852.

Applicants respectfully request that the provisional double patenting rejection be held in abeyance until the claims are otherwise in condition for allowance. At which time a Terminal Disclaimer will be filed, if appropriate.

Claim Rejections - 35 U.S.C. § 102

Claims 1, 2, 4, 5 and 7 stand rejected under 35 U.S.C. § 102(a) as allegedly being anticipated by Kita et al. (JP 2003-132949) (*Kita*, hereinafter) and as evidenced by MatWeb Datasheet-KS6 Primary Synthetic Graphite. Applicants respectfully traverse this rejection at least for the reasons advanced in detailed below.

Applicants respectfully submit that the subject application is the national stage entry of PCT/JP03/09739 which claims a convention of priority to Japanese Patent Application 2002-222510. The subject application also has a claim for priority under 35 U.S.C. § 119(a)-(d) to Japanese Patent Application No. 2002-222510, having a foreign priority filing date of July 31, 2002. A certified copy of Japanese Patent Application No. 2002-222510 was filed

in the subject application on January 21, 2005.

An accurate English translation of Japanese Patent Application No. 2002-222510 is being submitted concurrently herewith to comply with the requirements under 37 C.F.R. § 1.55(a)(3), thereby perfecting Applicants' claim for foreign priority to Japanese Patent Application No. 2002-222510.

The foreign priority filing date of Applicants' subject application, i.e., July 31, 2002, antedates the May 5, 2003 publication date of the *Kita* reference (JP 2003-132949). Thus, since Applicants' claim to foreign priority is hereby perfected, Applicants respectfully request the withdrawal of this rejection, and the allowance of independent claim 1, 2, 4, 5 and 7.

Claim Rejections - 35 U.S.C. § 103

Claims 1-7 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ueda et al. (U.S. Pat. Pub. No.: 2002/0192565 A1) (*Ueda*, hereinafter) in view of Shimizu et al. (U.S. Patent No.: 5,709,968) (*Shimizu*, hereinafter). Claims 1-7 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ueda et al. (U.S. Pat. Pub. No.: 2002/0192565 A1) (*Ueda*, hereinafter). Applicants traverse these rejections at least for the reasons advanced in detailed below.

Applicants respectfully submit that present independent claims 1 and the claims dependent therefrom, are patently distinguishable over *Ueda* and *Shimizu*, since *Ueda* and *Shimizu*, taken either alone or in combination, fail to disclose, teach or suggest all of the features recited in the pending claims.

For example, independent claim 1 is directed to, *inter alia*, the feature of a lithium secondary battery wherein 0.2 to 10 wt.% of a cyclohexylbenzene having a fluorine atom bonded to a benzene ring thereof is contained in the nonaqueous electrolytic solution.

Ueda appears to disclose a cylindrical nonaqueous electrolytic secondary battery including a band-like positive electrode plate 2 and a negative electrode plate 3 that are spirally rolled up to form an electrode plate assembly (see *Ueda*, e.g., Fig. 1, paragraph [0072]-[0073]).

However, as the Examiner correctly admits on page 5 of the above-referenced Office Action, “Ueda et al. does not expressly teach cyclohexyl benzene having a halogen atom bonded to a benzene ring that is a compound having the formula (I); or a cyclohexyl benzene having a halogen atom bonded to a benzene ring that is 1-halogeno-4-cyclohexyl benzene.” The Examiner is reliant upon *Shimizu* for disclosing this feature.

The Examiner states that *Shimizu* discloses “the concept of adding a benzene compound to a nonaqueous [*sic*] electrolyte, wherein at least one halogen group A₁ to A₅ is induced into the benzene ring of the benzene compound”, and cites col. 3, lns. 25-45, col. 6, lns. 40-45 and col. 7, lns. 3-7, as allegedly disclosing this feature (see page 5 of the Office Action dated August 21, 2008).

Applicants respectfully submit that *Shimizu* appears to disclose a nonaqueous electrolyte secondary battery having a reagent serving as a mechanism for preventing overcharge (see *Shimizu*, e.g., col. 3, lns. 8-11). *Shimizu* appears to further disclose benzene compounds act as a mechanism for preventing overcharge because benzene compounds perform an oxidation-reduction reaction if the battery has been overcharged (see *Shimizu*, e.g., col. 4, lns. 59-63).

However, Applicants respectfully submit that *Shimizu* merely teaches the addition of a benzene compound having a specific substituent group such as a halogen to a nonaqueous electrolyte can prevent the occurrence of thermal runaway of a nonaqueous electrolyte secondary battery, and NOT cyclohexylbenzene having a benzene ring on which a fluorine atom is attached, as recited by present independent claim 1.

Thus, even if the Examiner’s combination of *Ueda* and *Shimizu* could be considered proper, which Applicants respectfully submit it cannot, the combination fails to disclose, teach or suggest cyclohexylbenzene having a benzene ring on which a fluorine atom is attached, as in the present invention.

In contrast to both the *Ueda* and *Shimizu* references, the inventive step of the claimed invention is the effect that battery cycle performance (i.e., discharge capacity retention after repeated charging-discharging procedure) is greatly improved if a cyclohexylbenzene having a benzene ring on which a fluorine atom is attached is incorporated into a nonaqueous

electrolyte solution. The above-mentioned improvement is described in Table 1 of the instant specification (see, e.g., pages 11-13) in the form of experimental data.

Furthermore, the inventors have obtained additional comparison data by carrying out an experimental run and has prepared a Declaration pursuant to 37 C.F.R. § 1.132, which shows the improved battery performance when using cyclohexylbenzene having a fluorine attached to the benzene ring. The declaration is being submitted concurrently herewith for the Examiner's review.

In view of the foregoing, it is submitted that the present application is in condition for allowance and a notice to that effect is respectfully requested. If, however, the Examiner deems that any issue remains after considering this response, the Examiner is invited to contact the undersigned attorney to expedite the prosecution and engage in a joint effort to work out a mutually satisfactory solution.

Except for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 19-2380. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,
NIXON PEABODY LLP

Date: November 20, 2008

/Anthony J. Canning, Reg. #62,107/
Anthony J. Canning
Registration No. 62,107

NIXON PEABODY LLP
Suite 900, 401 9th Street, N.W.
Washington, D.C. 20004-2128
(202) 585-8000